

ABSTRACT OF THE DISCLOSURE

A crystalline semiconductor film having crystal grains of large grain size or crystal grains in which the position and the size are controlled is formed to manufacture a TFT, whereby a semiconductor device that enables a high-speed operation is realized. First, a reflecting member is provided on a rear surface side of a substrate on which a semiconductor film is formed (semiconductor film substrate). When a front surface side of the semiconductor film substrate is irradiated with a laser beam that penetrates the semiconductor film substrate, the laser beam is reflected by the reflecting member to irradiate the semiconductor film from the rear surface side. With this method, an effective energy density is raised in the semiconductor film, and an output time is made long. Thus, the cooling rate of the semiconductor film is made gentle and crystal grains of large grain size are formed. Further, the front surface side of the semiconductor film substrate is irradiated with the laser beam by using a substrate on which a reflecting layer is partially formed as the reflecting member, whereby the semiconductor film is partially irradiated with the laser beam from the rear surface side. Thus, a temperature distribution is generated in the semiconductor film, and the location where a lateral growth is generated and the lateral direction can be controlled. Therefore, the crystal grains of large grain size can be obtained.